

STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF FORESTRY
NORTHERN REGION

FAIRBANKS AREA

FOREST LAND USE PLAN

Nenana Ridge Habitat # 3
NC-1348-F

ADL 418043

February 2010

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I. INTRODUCTION

A. Purpose

The purpose of this Forest Land Use Plan (FLUP) is to provide sufficient information for reviewers to ensure that the best interest of the State will be served by the Department of Natural Resources, Division of Forestry, Fairbanks Area, offering this proposed timber sale. This FLUP deals with site specific considerations of the sale. The boundaries and precise volume of the sale may be refined if and when the sale is developed. Site specific research has been completed on title considerations, land classifications, applicable land management plans, appropriate silvicultural techniques, regulatory and statutory requirements, and physical conditions that apply to the proposed sale area. The proposal is for the harvest of approximately (+/- 30%) 300 acres of land that is predicted to yield approximately (+/- 30%) 500,000 CF of mixed species fuelwood. The sale design may be altered to mitigate potential conflicts. It will be the responsibility of the Forester-In-Charge to ensure that any purchaser of this sale harvests timber per the sale design and sale contract provisions and adheres to Alaska Forest Resources and Practices Act (AFRPA) best management practices.

The public is invited to comment on any aspect of this proposed timber sale with regards to the Preliminary Finding and Decision (AS 38.05.035). Comments should be mailed to the Division of Forestry, 3700 Airport Way, Fairbanks, Alaska 99709 or by email at douglas.hanson@alaska.gov. Comments must be received at the Division of Forestry no later than March 8th 2010 in order to be considered in the Final Decision of whether the sale will be held in whole or in part. To be eligible to appeal the final decision, a person must have provided written comment by March 8th 2010.

B. Five-Year Sale Schedule

The general area and timber type that this proposed sale occupies has been shown as a potential sale area in the current Five-Year Schedule of Timber Sales (FYSTS) for Fiscal Years 2010-2014 as required by AS 38.05.113.

C. Location

The proposed sale is located 39 miles southwest of Fairbanks and 7 miles northeast of Nenana within the boundaries of the Doyon Region. Coastal Zone Management considerations do not apply. The proposed sale area is located within the south half of Section 36, Township 3 South Range 7 West, Fairbanks Meridian and Sections 1, 2, and the north half of 11, Township 4 South Range 7 West, Fairbanks Meridian. The sale area is shown on the attached map and is within the United States Geological Survey (USGS) 1:63,360 Quadrangle map titled Fairbanks C-4. The tract is accessed from Fairbanks by driving west on the Parks Highway to milepost 328. At this point the route continues south along Nenana Ridge Road, a primary all season forest road, until reaching Ruffed Grouse Road, a secondary all season road. The route then extends west along Ruffed Grouse Road to mile 5.5 where an access road to timber sale NC-1242. Follow this road 2.4 miles to where the start of the new all season road would be built to the proposed sale area for a distance of about 2 miles.

D. Title, Classification and Other Active or Pending Interests

The acquisition for the land in Section 36 upon which the sale is proposed is based on General Selection 23. The title was transferred by Patent 50-83-0077. The acquisition for the land in Sections 1, 2, and 11 upon which the sale is proposed is based on the applicable

State case file MH-32. This land has the classification of Mental Health (MH) 32. The State of Alaska has redesignated the land use as General Grant land. The title was transferred by Patent 1232047. There are no title restrictions on the area. The primary land classification for the area is Forestry per Classification Order NC-82-065. The proposed sale area is within Unit 5A of the Tanana Valley State Forest (TVSF).

E. General Timber Sale Program Objectives

1. **Develop the State's Renewable Resources.** To follow the DNR's constitutional mandate to encourage the development of the State's renewable resources, making them available for maximum use consistent with the public interest. Sustain and promote a healthy, long-term timber industry in the State, through providing a secure source of timber for harvest that produces raw materials for local manufacturing plants when practical while protecting other resources such as fish and wildlife.
2. **Improve the State's Economy.** To help the State's economy by providing royalties to the State in the form of stumpage receipts, as well as contributions to local economies through wages, purchases, jobs and business.
3. **Improve Forest Health.** To improve forest growth and vigor by harvesting and replacing mature stands and stands with declining vigor with new healthy regenerating stands, while protecting and maintaining other resource values. The actions authorized under this decision will follow the constitutional mandate of sustained yield and shall adhere to multiple use management as described in the TVSF Management Plan.
4. **Improve Wildlife Habitat.** Meet the statutory wildlife management objective for the TVSF (AS 41.17.400(e)) that provides for the production of wildlife for a high level of sustained yield human use through habitat improvement techniques, while allowing for timber management and other beneficial uses of public land and resources.

II. LEGAL AUTHORITY

This Division of Forestry is taking this action under the authority of AS 38.05.035 (e) (Best Interest Finding); AS 38.05.110-120 (Alaska Land Act Statutes); 11 AAC 71 (Timber Sale Statutes and Regulations); AS 41.17.010-.950 and 11 AAC 95 (Forest Resources and Practices Statutes and Regulations).

III. ADMINISTRATIVE RECORD

The case file ADL 418043 and the Tanana Valley State Forest Management Plan constitute the administrative record for this finding.

IV. DISCUSSION OF ISSUES

A. Physical Characteristic of the Sale Area

1. **Topography.** The site is on a west-northwest facing moderately sloping hill above a small unnamed tributary of Win Lake which drains into the Tanana River. Elevation ranges from 550 feet to about 950 feet. The terrain is of varied rolling topography with interspersed small valleys. There is an average grade of 20 percent.
2. **Soils.** Soils in the sale area are classified as the Fairbanks Series. Fairbanks soils are productive upland silt loam soils that have formed in loess deposits. Fractured schist underlies these soils at a relatively deep level especially on the lower slopes.
3. **Waterbodies.** There are no defined drainages within the proposed unit boundaries. The USGS quadrangle map indicates a creek within the eastern most proposed unit.

This creek however originates outside the unit in the black spruce and birch covered valley to the west. This creek is part of a collection of creeks that flow into Win Lake and eventually into the Tanana River. They are very small boreal forest drainage streams with waters that are usually tannic stained. The nearest of these valley creeks lie 470 feet west of the proposed sale area. It is separated from the sale area by black spruce interspersed with patches of birch. The timber sale is anticipated to have minimal impact on water quality, due to the location of the proposed units in relationship to surface waterbodies. Access into the sale area will not cross flowing watercourses. The State Department of Environmental Conservation had no comment on this sale. The sale area presents no obstacles that would prevent implementation of the best management practices of the AFRPA to maintain water quality.

4. **Stand Conditions.** The timber stand and proposed harvest unit consists of a mostly closed canopy birch and aspen forest with widely scattered spruce sawtimber trees. Balsam poplar is also present. The stand is about 80 years of age and has reached its maximum value in terms of wood quality. Overall the stand is fairly healthy and there are hardwoods here that are suitable for sawtimber. Some trees however, are bent over from past heavy snows. Stand composition averages 90% hardwood and 10% white spruce. The hardwood component of the stand ≥ 6 " diameter breast height (dbh) has about 225 trees/acre of birch with an average dbh of 8" and an average height of 55'. Basal area per acre is 75 square feet/acre. Aspen comprise about 120 trees/acre and are of similar size as the birch. Basal area per acre is 17 square feet/acre. Sawtimber size white spruce is present in scattered patches (300' to 400' spacing) at 10" to 15" dbh and 75' tall. White spruce advanced regeneration and small poletimber patches occupy 5 to 10% of the understory (10 to 25 trees/acre) and are more predominate along the lower slopes. This stand has almost a continuous closed canopy and as such, supports an understory of mostly roses, horsetail and various forbs. There is little moss, grass or alder. Where canopy openings exist, alder and grass cover are somewhat heavier.

B. Historic and Current Land Use

The historic uses of land in the general area have been logging, hunting, trapping, and general trail use. The current uses of the area are hunting, trapping, mushing and wood cutting.

C. Wildlife Habitat

Wildlife typical of the interior are found here. Moose, snowshoe hare, voles and grouse are also common in the nearby young seral stands along Ruffed Grouse Road. There are no known raptor nests within the proposed sale area. No critical wildlife habitat has been identified for this area (TVSF Management Plan), nor has any become apparent during ground reconnaissance.

Treatments proposed for this stand are projected to enhance habitat conditions for ruffed grouse, moose, voles, hares, and ultimately, lynx, marten and fox. In the past, Alaska Department of Fish and Game, Division of Wildlife Conservation (ADFG) and now Division of Habitat, have recommended managing for as much diversity as possible when prescribing harvest unit size, shape and position to mimic the results of wildfire or other stand replacement phases such as insect outbreaks or flood events.

To accomplish these objectives snags will be retained to provide late-successional wildlife habitat for hole nesting birds, woodpeckers, small mammals, and other species requiring perching habitat. The unit will be laid out with an uneven edge, along and between timber types. This will create varied edge effect beneficial to many wildlife species.

During review of the FY 2010-2014 FYSTS, the Division of Habitat commented that specific planning was not developed with the Division of Wildlife Conservation (DWC) concerning habitat issues of this proposed sale. The use of the word “Habitat” in the sale area name was requested not to be used because of this. This sale however is designed in similar fashion as the other “Habitat” sales and will employ a similar prescription which is detailed below in item (J-2). DOF and DWC have worked cooperatively on many of the ruffed grouse habitat projects in the area. DOF is familiar with the measures used to increase quality early-successional habitats available for ruffed grouse, moose and other species. Past projects in the Nenana Ridge area have been quite successful in this regard.

D. Fisheries and Water Quality

Best management practices will be implemented to ensure water quality standards in all water courses. During review of the FY 2010-2014 FYSTS, the Division of Habitat had no particular fish or wildlife concerns with the proposed access road or harvest unit.

The sale will utilize all season access with a new 4 mile segment of secondary road. Road location will be in upland areas that are well drained. No creeks will be crossed in the construction of this road. Water bars will be installed as necessary. There is no reasonable expectation that operations on this level will have deleterious effects on fish habitat in the Tanana River or its tributaries.

E. Subsistence

The tract has not been designated as a subsistence zone. The proposed sale of timber is anticipated to have no deleterious effects on subsistence activities. Subsistence activities of fishing, trapping, hunting, birch bark peeling and gathering of berries and other non timber forest products may occur on State owned lands.

F. Recreation and Tourism

Recreation use of the general area is moderate due to the presence of all season roads and winter and summer trails. Hunting and trapping are the most common activities. Hunting for moose, black bear and grouse are popular. During the fall moose season, hunter traffic is heavy. Recreation activities in proximity to the timber sale area primarily consist of hunting and trapping activity, as well as some recreational snowmachining, ATV riding and dog mushing. Firewood cutting is also common along Ruffed Grouse Road. Recreational opportunity and use in general has increased as new roads and trails have opened.

G. Scenic Resources

The sale is located in an area of varied topography and has a west to northwest aspect with many small valleys and ridges. It will not be visible from the Parks Highway. It may be visible from the Tanana River in limited locations. Leave trees of white

spruce and smaller birch will somewhat obscure the harvest area and help blend the cut border with existing landscape.

H. Cultural Resources

The TVSF Management Plan does not list any historic cultural or archaeological sites in the vicinity of the proposed harvest. This sale was originally proposed in the FY 2008-2012 FYSTS and during review of that plan, the State Office of History and Archaeology (OHA) noted that the sale area is in an area of medium to high archaeological potential and recommended a site review prior to ground disturbing activities.

During the summer of 2009, the Division of Forestry contracted the Tanana Chiefs Conference to conduct an archeological survey of the harvest area and proposed access road. During that survey there were no cultural sites found that would be affected by this timber sale.

During the course of activities associated with this timber sale, cultural and/or paleontological resources may be inadvertently discovered. Should such discovery occur, these sites shall be protected from further disturbance and OHA contacted immediately so that compliance with state laws governing cultural resources may begin.

Under the Alaska Historic Preservation Act (AS 41.35), all burials on state land are protected. If burials or human remains are found, all land altering activities that would disturb the burial or remains shall cease and measures taken to protect it in place. OHA and a law enforcement officer will be notified immediately to ensure that proper procedures for dealing with human remains are followed.

I. Sustained Yield and Allowable Cut

The Alaska Forest Resources and Practices Act (AS 41.17.060 (c)) and Article VIII Sec. 4 of the State Constitution require that the State forest land be managed on a sustained yield basis. Sustained yield is defined in the Alaska Forest Resources and Practices Act (AS 41.17.950(25)):

“Sustained Yield” means the achievement and maintenance in perpetuity of a high level annual or regular periodic output of the various renewable resources of forest land and water without significant impairment of the productivity of the land and water, but does not require that timber be harvested in a non-declining yield basis over a rotation period.

The Annual Allowable Cut (AAC) is the amount that can be harvested from forest land managed for forestry purposes in a year under sustained yield management. The AAC in the Fairbanks Area is based on a ten-year average as determined by the Parsons and Associates, Inc. report titled “Tanana State Forestry Lands Periodic Sustained Yield Analysis”. This sale complies with sustained yield/allowable cut principles outlined in the Fairbanks Area Five-Year Schedule of Timber Sales for FY 2008-2012. The AAC for the Fairbanks Management Area is approximately 6,260 acres. The AAC will not be exceeded for this proposed sale.

J. Silvicultural Prescription

1. **Stand Silvics.** The normally merchantable species of trees here in the Tanana Valley are white spruce, birch, aspen and balsam poplar. Data and research on regeneration and growth characteristics of these species are compiled within the Resource Analysis of the Tanana Valley State Forest (TVSF) Management Plan. The harvest and reforestation systems available in Interior Alaska are also reviewed and listed in the Resource Analysis. The results of the public and agency discussions for harvest and reforestation are discussed in the TVSF Management Plan. Silvicultural harvest systems that facilitate even-aged (natural) management are generally preferred. They mimic the ecological impact of wildfire and other disturbances and result in the greatest increase in site productivity. Even-aged management is normally accomplished through clear cuts, patch cuts and heavy partial cuts (such as seed tree or shelterwood systems), which opens up the site to maximum solar gain. This results in the greatest production of both young hardwood so important to wildlife and the spruce understory valuable years later as timber. Even-aged management techniques are utilized to provide young, vigorously growing stands in juxtaposition to older, undisturbed stands. Such placement of harvest units can optimize natural seedling and the edge effect. The proposed sale is a heavy partial cut harvest that will open the forest resulting in a strong vegetative response birch and release of advanced spruce regeneration.
2. **Specific Management Objectives.** Attempt to improve vigor by replacing the aging birch and aspen with younger faster growing trees. Utilize the current commercial value of this timber stand. Release the spruce understory from competition and allow sunlight to warm the forest floor. Protect residual trees from logging damage and return this site to a productive mixed forest at an equal or greater basal area than currently exists. The overall stand composition is 90% hardwood and 10% spruce. It is expected that the hardwood component will again comprise 90% of the stand from seeding and sprouting. The objective is to maintain a hardwood component of 80% or better. Provide a young seral stand with vigorous reproduction that will provide wildlife habitat as well as preclude the necessity of artificial reforestation. Birch and aspen smaller than 6 inches, white spruce and snags would be reserved from harvest. Maintain undamaged spruce sawtimber trees to provide a seed source as well as cover. Stimulate root sprouting of aspen and stump sprouting of birch and balsam poplar through harvest activities. The operator will be required to fell aspen and balsam poplar even if not removed. This requirement will be waived in areas of advanced spruce regeneration. By leaving some live mature hardwood trees during harvest operations visual aesthetics will be improved as well as the future creation of snags or cavity trees. Provide cover for wildlife and scenic resources by leaving small birch, aspen and all spruce standing. It is reasonable to assume that these objectives will be realized under the recommended prescription.
3. **Harvest Methods.** The sale will be harvested by the seed tree silvicultural system. Birch and aspen trees six inches dbh and larger will be harvest. Snags, residual hardwoods and all white spruce will not be cut. Residual trees will be protected from damage during harvest operations. Harvesting will be by the whole tree yarding system. Slash disposal at the landings will be by burning or by salvage for fuelwood use

4. **Regeneration.** Scarification of the site will be required. Residual and adjacent hardwoods and spruce will provide seed. Hardwoods will also sprout either from roots or the stump. These trees are still young and healthy enough to provide a vigorous response. A survival/regeneration survey will be conducted three years after harvest. If the survey shows patches of non-stocked areas greater than ½ acre and totaling 32.7 acres, a replant, or scarification will be considered, to meet Forest Practices standards. The goal for regeneration is to achieve a minimum of 450 evenly distributed trees per acre.

K. Transportation

The planned access to the proposed sale is by all season primary and secondary road extending south from the Parks Highway. New secondary road construction of two miles will be required. Road construction will be facilitated by relatively consistent slopes with few hogbacks. The road is designed to avoid sensitive vegetative cover types such as riparian zones, poorly drained black spruce areas and wetlands. Existing primary and secondary roads will not require any reconstruction work. Access routes will be maintained to the standards set out in the AFRPA.

L. Erosion

There are two soil erosion concerns: surface erosion and mass wasting of soil and debris. Road construction and poor maintenance of roads primarily causes surface erosion. To avoid erosion, debris will be placed back onto skid trails and water bars installed on skid trails and roads if necessary. Scarification will be performed along contours to avoid any runoff problems within the units. The location of skid trails will optimize skidding distances and provide adequate landing areas. The other aspect of erosion (mass wasting and debris avalanches) normally occurs on slopes of more than 70 percent. In the area of the proposed timber sale slopes do not reach this grade.

M. Mining

Mineral potential within this unit of the TVSF has been rated moderate to low. There are no mining claims within the sale area and the ground remains open for staking and leasing. Material sites are located to the north along the Parks Highway. More detailed information on subsurface resource use is found in the TVSF Management Plan. Other than providing access, and sharing some of the same access roads, this sale will have no impact on the potential mining resources or mining activity in this area.

N. Materials

No rock materials will be required for the construction of access roads.

O. Economics

In addition to generating royalties to the State's general fund, the proposed sale will create economic benefits to the Fairbanks North Star Borough and to other locations in Alaska. The Borough business community will receive direct economic benefits from providing support services for the operators through sales of fuel, food, housing, medical and miscellaneous supplies. The residents of the Borough will receive an indirect benefit through taxes paid to cities and the Borough by the operator and employees during the course of the timber harvest operation.

The sale is expected to benefit the local economy by providing jobs. It will have a positive impact on local employment by generating numerous man-hours of work associated with the harvest and transportation of wood products from this sale. Additionally the public may benefit from access to additional personal use fuelwood areas.

V. MARKET CONDITIONS

Renewable heating fuels such as firewood are in high demand in interior Alaska to offset fluctuating oil prices. A market for biomass fuels for the creation of pellets and chips is also starting to emerge in the Fairbanks area. Fine particulate matter that leads to poor air quality is a concern for local regulatory agencies but wood energy is still seen as a critical component for local residents as new technologies emerge for more efficient wood and pellet stoves. Local logging operations are experiencing high demand for firewood and are in need of a reliable supply of timber to meet this demand. This sale is expected to contain timber well suited for fuel wood production.

The job market is still in poor condition and timber sales such as this create jobs in the forest products industry. Operators, drivers, mechanics and processors are needed to deliver firewood and wood products to local residents and industry.

VI. ALTERNATIVE ACTIONS

There are four possible alternatives to consider for this sale. A discussion of each of the four alternatives follows:

1. To continue the sale(s) as proposed.

This alternative meets the objectives of the Five-Year Schedule of Timber Sales and DNR'S constitutional mandate. It also meets the silvicultural objective of improving forest vigor, provides for a value-added end product and creates additional jobs in Alaska due to the combination of road building, logging, and trucking. This alternative also complies with the management objectives of the TVSF Management Plan for Unit 5A.

2. To modify the sale(s) by making them smaller or larger.

The proposed sale unit is a logical setting for typical commercial logging equipment in Interior Alaska. The size of the sale is designed to be large enough to be economically viable considering access development and mobilization costs and distance to processing facilities. Sales of this size are appropriately balanced to maintain other resource values as well as provide economic benefits to the Tanana Valley.

3. Defer the sale of this timber to a later date.

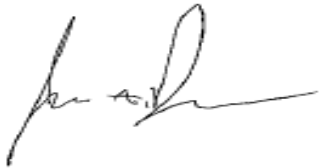
Deferring harvest to a later date would fail to meet many of the objectives of the sale program. One of the main objectives is to make State-owned timber consistently available to the timber industry.

4. Do not offer this timber for sale.

This alternative would result in not meeting any of the objectives outlined for this management action. Utilization of the forest resource would not be achieved. There would be no significant contribution to the State and local economies. This alternative would delay the management objectives planned for the area, deny making a source of raw materials available to the local wood products industry, and would delay the harvest of mature trees, prior to the onset of disease or insect infestation. Decay in infected and infested mature hardwood trees results in the loss of economic value.

VII. PRELIMINARY FINDING AND DECISION

The purpose of this decision is to determine if the Department of Natural Resources, Division of Forestry, will make available timber located within Section 36, Township 3 South Range 7 West, Fairbanks Meridian and Sections 1, 2, and 11, Township 4 South Range 7 West, Fairbanks Meridian. After due consideration of all pertinent information and alternatives, the DNR has reached the following **Preliminary Decision: To offer the sale as proposed in Alternative 1.** In addition, the DNR finds that this preliminary decision satisfies the objectives as stated in this document and it is in the best interest of the State to proceed with this action.



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2/3/2010

(Date)